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What is childhood asthma?

Childhood asthma is a chronic disorder of the breathing passages in children from birth through age 14. Persons with asthma experience constriction (tightening of the muscles surrounding the airways) and inflammation (swelling and irritation of the airways). Together, constriction and inflammation cause narrowing of the airways, which results in recurrent episodes of wheezing, breathlessness, chest tightness, and coughing. Environmental and other factors such as dust, pollen, pet dander, or strong smells are common triggers for asthma "attacks."

Why is childhood asthma a health concern for Detroiters?

Nationally, the number of people living with asthma has been increasing since the early 1980's for all racial and age groups. According to the National Heart, Lung, and Blood Institute (NHLBI), this chronic disease does have a worse impact on children and Black people than the rest of the population.¹³ Both of these groups are highly represented in the city.

Asthma cannot be cured, and in its worst stages, can be life threatening. Though not curable, there have been innovations to manage the inflammatory condition associated with the disease. Knowledge regarding asthma, and proper treatment/management could help to improve daily functioning for Detroiters with asthma, avert acute attacks, and decrease the chances of damage to the airways and lungs over time.¹⁴

Childhood Asthma in Detroit

Children under 5 account for the highest U.S. rate of emergency department visits due to asthma. Between 1992 and 1998, rates of national emergency department visits for asthma increased, with the greatest increase occurring in children ages 10-17. Hospitalization rates also rose during this time period. Between 1979-81 and 1997-99, hospitalization rates for children under 5 increased 48 percent. In 1997-99, hospitalization rates were more than three times higher for Black children than for White children. Between 1990 and 1997, the Michigan hospitalization rate for asthma was 17.0 per 10,000 residents. The rate of hospitalization for Black residents of Michigan (46.5 per 10,000 residents), however, was four times higher than White residents (11.6/10,000 residents). From 1997-1999, an average of 43.5% of Detroit's hospital discharges for asthma were for persons under the age of 18.

An MDCH analysis of childhood asthma hospitalizations from 1989 to 1993 presented findings related to asthma in Detroit as compared with the rest of Wayne County. During that period, the rate of hospital discharge for childhood asthma was 2.3 times higher for Detroit than the rest of the county. Of 12, 500 1989-1993 asthma discharges for children under 15 in Wayne County, 72% were Detroit residents. During the analysis period, discharge rates rose for Detroiters while remaining stable for the rest of the county. Rates for White children remained about the same while rates for Black children increased. According to the study, the highest rates of asthma discharge were in the central zip codes of the Detroit (see Appendix II for more detail). For children under five, *HP2010* recommends the reduction of asthma related hospitalizations from 46.5 per 10,000 in 1997 to 25 per 10,000 children under five in 2010. For ages 5-64, the aim is to reduce the 1997 hospitalization rate of 12.5 per 10,000 population to 7.7 in 2010.